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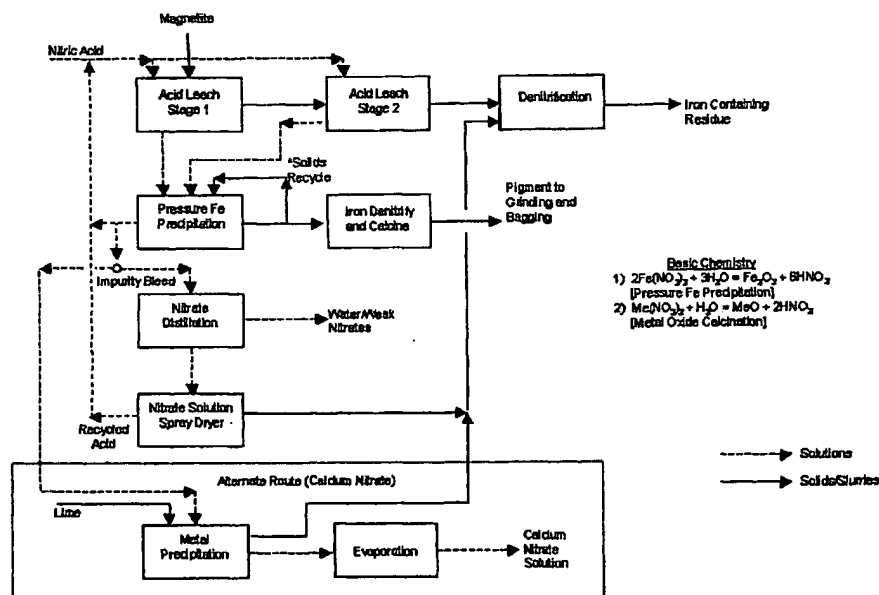
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[Continued on next page]

(54) Title: **IRON OXIDE PRECIPITATION FROM ACIDIC IRON SALT SOLUTIONS**



(57) Abstract: Improved methods for treating metallurgical compositions involve reacting a metallurgical composition with an aqueous nitric acid solution. The reaction is performed at a pressure or at least about 220 psig and at a temperature of at least 100°C. The metallurgical composition comprises iron and one or more non-ferrous metals. The reaction dissolves at least a portion of the non-ferrous metal compositions into the solution which is in contact with solid ferric oxide. The reaction can be repeated on the isolated solids to increase the purity of ferric oxide in the solids. Zinc can be removed from mixed metal solutions obtained from furnace dust by adding base to precipitate zinc hydroxide.



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